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THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Creating Local Markets for Honey.

The California *Grocer* makes some comments on the suggestions we made sometime ago about scattering information about the uses of honey, and its value both as food and medicine, and while thoroughly endorsing the plan, it remarks as follows:

If it be acknowledged that an adoption of this means will be at all effective, why not make it generally so? If the suggestion of the BEE JOURNAL is worthy of adoption at all, it is worthy of being adopted to the fullest extent, as it is one of those propositions the remunerative quality of which is in exact ratio with the amount of energy and enterprise expended upon it. The information, published in an economical form, should accompany every sale, whether to wholesaler or retailer, in order that when the goods reach the consumer's market, the retailer might be enabled to send this information broadcast among his patrons to induce the purchase of this delicious household luxury.

The Indiana State Fair commences Sept. 24, and promises to excel all former ones. Bee-keepers should see to it that there is a large display of honey, both comb and extracted.

Mr. W. F. Clarke, Guelph, Ont., will attend the North American Bee-Keepers' Convention at Toronto, next month, and represent the BEE JOURNAL as well as make a report of the proceedings.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey at Fairs, will sell almost a fabulous quantity of it.

Caledonian Apiarian Society.

Mr. John D. Hutchinson, of Glasgow, Scotland, has sent us a short report of the Bee and Honey Show of Scotland, from which we extract as follows:

The tenth show of this society was held in a tent inside the showyard of the Highland Society. For various reasons it was not expected that the show would be a large one. The weather had been very much against the bees. Nearly all the exhibitors are from the southern portion of the country, and the existence of the society was only made known to some north-country persons yesterday, when they were told that bees were actually being shown. As a whole, the show, though small, was worth a visit. Among the most successful of the competitors is Mr. Angus Cameron, of Blair Athole, the winner of the Queen's Prize at the Wimbledon Rifle meetings in 1866 and 1869.

Considering the difficulties we have had to contend with this year, our show has been very successful both financially and otherwise. The bee-keepers are now getting their colonies removed to the "Heather," so with good weather (such as we have at present), I have no doubt but that we shall have a good harvest of heather honey. There has been little or no honey as yet, owing to the bad weather we have had. Everything connected with bee-keeping has been very quiet for sometime past.

Preserve the Wax.

Mrs. L. Harrison gives the following advice in the *Prairie Farmer*:

All hives containing honey, in which bees have died, should be fastened up securely so that no bees can enter, for if they are permitted to carry it off as soon as it is all gone they will try the strength of all weak colonies and many will be destroyed. We prefer to brush off the bees from combs and store them in a room, instead of fastening them in hives where they have no ventilation, as they become damp and moldy, and the pollen sours. We put our combs into clean hives and pile them one upon another in the honey house, where they are secure from bees, and will remain dry. It is not necessary to pick out dead bees from combs for,

the bees will do it, and work cheaper than we can if one comb at a time is given to a strong colony. Comb is a bee-keeper's stock in trade; better than money in the bank; and should be preserved, for while bees are building a pound of it they will store 20 pounds of honey. All bits of refuse comb should be made into wax, as it is very scarce at present, brings a good price, and is in demand for foundation.

Bee Tent for Fall Work.

The *American Agriculturist* remarks thus about the use of a bee tent for manipulating bees in the fall:

As is well known, bees become irritable if handled after gathering ceases in the autumn. To take out extra combs, extract the uncapped honey, and prepare for winter as directed above, is often the most dreaded work of the season. The bees seem cross at the failure to obtain labor, and cannot endure disturbance. By using a bee tent, made of wire gauze or mosquito netting, and large enough to set over the hive and operator, all this danger and trouble is avoided. The bees are apparently frightened into good behavior, and are as amiable as though in the midst of the honey harvest. The bee tent also prevents robbing, which is quite likely to be induced if we work with the bees when they are irritable from enforced idleness.

The Keithsburg, Ill., *News* is growing eloquent over the fact that the grape sugar refineries are gathering up old bones, rags, etc., to make its villainous stuff from. It says:

Smith's team has been hauling bones from the slaughter houses and putting them in cars for a Burlington market. These bones are used in the sugar refinery. Just think! bones in your sugar! the nasty, stinking bones. Honey, fresh from the "blessed bees" is the only pure sweet.

The bees are now working on the sand mint. They have pretty much left the corn tassels. The sand mint will last till fall, and makes most excellent honey. Thank goodness there is plenty of sand mint here in the bottom. More than can be utilized by the numerous colonies kept by our several apiarists.

Apis Mellifica in Java and Ceylon.

The following article concerning the bees taken to Ceylon and the island of Java, by Mr. Frank Benton, was written for the *Bienenzeitung*, by Mr. A. Schroder, of Trieste, Austria, and translated by Mr. A. Neighbour, of London, England, for the *Journal of Horticulture*, and it will be read with interest by the bee-keepers of America:

The gentleman in charge of the Imperial Germ n Consulate of Batavia, who has for years past been kind enough to keep me informed of all that takes place in the island of Java as regards bee-keeping, sent me recently a cutting from a native paper which contains some notices of the bees introduced into Java by my friend Mr. F. Benton. Thinking that any information on the acclimatization of bees in Java may be of interest so far as the history of bee-keeping is concerned, I have translated the article referred to, of which the following is an extract:

"An American bee-keeper, Mr. F. Benton, who visited Java in order to study *Apis dorsata*, and, if possible, to introduce this bee into Cyprus, and thence into Europe and America, brought 9 colonies of bees with him, 7 being from Cyprus and 2 from Palestine. New hives were procured in order to try once more to acclimatize bees in Java after the first attempt to introduce the European bee, which was made in 1878, had proved a failure. The trial was made at Tjikeumeuh under the direction of Mr. Messink.

"The bees were placed in the Botanical Gardens under the superintendence of Mr. Benton, who looked after them personally for 25 days. When he left, the queens had commenced to lay eggs, and the other colonies, including their queens, were in tolerably good condition considering the long voyage they had made. During the first fortnight after their arrival the bees were fed with sugar dissolved in water. After this time the workers from four hives began to fly out and returned laden with honey. The queens continued depositing eggs for about the three months after their arrival in Java. After that, egg laying diminished, and at last the bees quite ceased to leave the hive.

"The number of worker bees became smaller and smaller, and finally some of the colonies dwindled down so much that only the queen and a few worker bees were left. With a great deal of trouble one colony was kept alive till the end of the year. But when the western monsoon set in in 1881, the population of this colony also dwindled away, and the workers flew out no longer, probably on account of the dampness of the atmosphere.

"It is to be regretted that the second attempt to acclimatize the bee in Java has also turned out a failure, in spite of all the precautions that had been taken to make the experiment a success. The loss of all the colo-

nies was probably caused by the worker bees not finding sufficient food during the hot season, the consequence being that the queens did not receive the proper amount of food, and, therefore, discontinued laying eggs.

"The experiment to domesticate the East Indian bee (*Njireean*) has given a better result than a previous attempt in 1877 and 1878. For the last eight months there have been two colonies of these bees in Tjikeumeuh with very large populations. The bees fly out and collect a great deal of honey. Eggs are deposited regularly, and without interruption. The honey of this bee is generally considered inferior in flavor, while the wax is said to be of excellent quality.

"A swarm given off by one of the colonies a short time ago has been secured, but it was no easy task. In Europe a swarm generally settles on a branch of a tree near the apiary, from which it is easy to remove the bees; but the Indian bees fly high up into the air, and do not settle till some time after."

Mr. Benton's attempt to acclimatize *Apis mellifica* in Java has unfortunately proved a failure, and I fear there is but little prospect of this bee becoming domesticated there, although I consider it quite possible if the bees, after their arrival in Java, are made to rear young queens, because the vitality of the imported queens becomes impaired during the long voyage. It would be necessary in that case to increase the population of the colonies and their stores quickly by feeding.

In Ceylon the bees that were imported by Mr. Benton have been more successful than those in Batavia. During the rainy season from May till September, the colonies were supplied with food, but in the remaining months of the year the bees collected sufficient honey from the flowering palm trees and other tropical plants for their own wants, and had even some to spare for their master. One colony swarmed three times, but, unfortunately, during the absence of the bee-keeper, the bees had been left in charge of the servants, who neglected to attend to them, so that all the three swarms flew away and settled in the jungles, where they probably perished during the rainy season.

For the last few years, experiments have been made to acclimatize the Vanilla in Ceylon, but only by artificial fertilization was it found possible to get these plants to produce mature fruit. The *Tropical Agriculturist* calls special attention to the numerous visits of *Apis mellifica* to the Vanilla blossoms, and adds that the owner of the plantation has for this reason entirely discontinued the fertilization of the Vanilla flowers by artificial means. In case the culti-

"It may be assumed that *Apis indica* is the bee referred to above. The indigenous *Apis indica* of Java was described by Latreille (*Annales du Museum d'Hist. Nat.*, v. p. 170, No. 4) as *Apis Peronii*. It is hardly to be supposed that experiments should have been made to domesticate the small East Indian bee, *Apis florea*.—EDITOR."

vation of Vanilla in Ceylon should prove successful, the importation of *Apis mellifica* will have largely aided to bring about this result, and it would be quite worth while for this purpose alone to keep bees in Ceylon, even if they had to be supplied with food during the rainy season.

Prof. A. J. Cook, who each summer during several years has worked in the Michigan Agricultural College apiary, with a class of from 20 to 40 students, all entirely unused to bees, says he has found no proof of the statement that bees know their master, and are more likely to sting a stranger.—*Exchange*.

Bee Convention at Toledo, O.

The next annual meeting of the Tri-State Bee-Keepers' Association will be held on the 12, 13 and 14 of next Sept., during the week of the Tri-State Fair at Toledo, Ohio. It is customary to say that Messrs. So and So, "and other prominent bee men will be present," etc., etc. Well, we have quite a number of "prominent bee men" (prominent at home) in this region, and they know how to raise the bees, get the honey, cure foul brood, and winter the bees too; but if Mr. Heddon is well enough to be at the meeting and the fair, we will pump him on wintering, and Mr. Muth on foul brood, and Novice, if here, on general principles, and the editor of the BEE JOURNAL to fill in where the rest lack. We do not expect to have any long essays or speeches. It being the week of the fair, we expect the great attraction for bee-keepers will be the Bee and Honey Show, and such bee-keepers and their friends as desire to stay several days can bring their "eatables" and blankets with them, and camp on the fair grounds. One or more tents will be provided for such as make application to me a few days before the fair, at a cost that will pay for the use of the tents, but we hope to be able to borrow tents and so save expense.

A premium is offered for the foundation machine making the best foundation for the brood-chamber on the grounds, and two mills have already arrived for that purpose, and the makers of three other machines have promised to be here if possible.

A premium list with entry blank rules and regulations, railroad fares, and freight rates, etc., will be sent free to all applicants.

DR. A. B. MASON.
Wagon Works, Ohio.

The Northwestern Illinois, and Southwestern Wisconsin Bee-Keepers' Association, will hold its next meeting on Sept. 4, 1883, at John Swanzy's, 2 miles South of Ridot, Stephenson County, Ill. There will be facilities to take persons from the station to Mr. Swanzy's.

JONATHAN STEWART, Sec.

Local Convention Directory.

1883.	Time and Place of Meeting.
Sept. 4.—Ohio State, at Columbus, O.	D. Spear, Sec.
Sept. 4.—N. W. Ill., & S. W. Wis., at Ridot, Ill.	Jonathan Stewart, Sec.
Sept. 12.—Eastern Indiana, at Richmond, Ind.	M. G. Reynolds, Sec., Williamsburg, Ind.
Sept. 12-14.—Tri-State, at Toledo, Ohio.	Dr. A. B. Mason, Sec., Wagon Works, O.
Sept. 18-20.—North American, at Toronto, Ont.	A. I. Root, Sec., Medina, O.
Oct. 9, 10.—Northern Mich. at Sheridan, Mich.	O. R. Goodno, Sec., Carson City, Mich.
Oct. 10.—Cass County, at Logansport, Ind.	De Witt Brown, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.	Thomas G. Newman, Sec.
Oct.—Northern Ohio, at Norwalk, O.	S. F. Newman, Sec.
Dec. 5-6, Michigan State, at Flint.	H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Honey Flora—White Sage.

The California *Rural Press* contains the following description of this great honey-producer, the white sage:

Not only is California famous for its specimens of vegetable growth of huge proportions, but also for some of much less imposing appearances. Among the latter there is no plant that has made this State more renowned than has the white or honey sage of southern California. Hardly ten years ago it was looked upon as a useless shrub, scarcely fit for sheep to browse upon. Since then the honey bee has made it famous. When it became known that honey flowed from the flowers of this plant, as it was never known to do in old Greece, and of a quality far superior, thousands of colonies of bees were located in the sage region. During our favorable years these bees gathered the honey from the flowers about them in such large quantities that many an ocean craft was weighted down with the nectar.

To all parts of the world has this delicious article been sent, and everywhere it has secured for the place from whence it came praises that no other honey had ever received. Besides the good words this State has obtained by its excellent honey, the people have received thousands of dollars which would never have entered the State if the nectar was wasted on the desert air, or if the plant in question did not exist in our midst.

It belongs to the genus *Audiberatia*, of the order *Labiata*, to which also the garden and other sages belong.

These plants are of great value as bee pasturage, as they are of easy growth, will thrive on drier soil than will most other honey-secreting plants, and their season of efflorescence continues many weeks. The writer has cultivated the white sage in Alameda county, near Berkeley, and as a result he finds that it thrives remarkably, growing luxuriously on cultivated soil, and producing an abundance of bloom. It is a plant of which every apiarist should disseminate the

seeds as much as possible, so that in the course of a few years, large patches of the plants may be found in the hills and valleys in various parts of the State. By doing this, such a thing as a short honey crop will hardly ever be known.

The Rev. J. C. Nevin, of Los Angeles county, in writing of the sages lately, says: "There are at least a dozen specimens of *Audiberatia* on the coast included under the popular names of 'white' and 'black' sage. The 'white' (*Audiberatia Polysachya*) differs very much in the form of inflorescence from all the others, and from that of the genuine sage. Its whole appearance makes it a rather striking plant, and when once known, to be easily recognized any where. Its range extends from Santa Barbara to San Diego. All lovers of the beautiful white honey gathered from its flowers ought to know and regard it with feelings of gratitude.

'Ball,' 'button,' or 'black' sage is undoubtedly a common name for several distinct species. Their general habit is much the same, whilst ordinarily the specific distinctions may not be so obvious. The whole appearance is more nearly like the true sage than is the 'white' above mentioned. Of the number, *A. Stachyoides*, *A. Palmeri* and *A. Clevelandi* are very closely allied and most difficult to distinguish. *A. Stachyoides* ranges from the Contra Costa mountains southward, while *A. Palmeri* and *A. Clevelandi* are confined to the southern part of the State. Just what precise form prevails around Los Angeles has not as yet been definitely settled; but it is mostly near to, if not identical with *A. Palmeri*, the typical form of which is found in San Diego county."

Notice to Iowa Bee-Keepers.

Quite a large number of bee-keepers in our State have expressed a desire for the formation of a State Association. A consultation with others has resulted in the decision not to attempt to hold a meeting during the coming State Fair, but if thought best to hold one during the time of the meeting of the State Agricultural Society at Des Moines next January. All bee-keepers who may be present at the Fair are earnestly requested to report to the Rev. O. Clute, at the Apian Exhibit, on or before 1 p. m. of Tuesday, the 4th day of September, 1883, who will give them notice of a meeting for consultation, and also for the selection of a committee of arrangements if one is deemed necessary.

O. O. POPPLETON,
Vice-Pres. N. A. B. K. Society.
Williamstown, Iowa, Aug. 10, 1883.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Fairs.—To any one exhibiting at Fairs, we will send samples of the BEE JOURNAL and a colored Poster, to aid in getting up a club. The Premiums we offer will pay them for so doing. For a club of 8 subscribers to the Monthly BEE JOURNAL, or 4 Weekly, we will present Dzierzon's Rational Bee-Keeping, price \$2.00.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 20, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—The demand for extracted honey is exceedingly dull; for comb honey, only fair; arrivals are plentiful. Stocks are large in the hands of corn merchants and others. Our own supply is larger than ever, and, for the present, we cannot compete with commission merchants. We may have to offer lower figures. Our prices so far were 70¢ for extracted, and 14¢ for comb honey on arrival.

BEESWAX.—Arrivals of beeswax are good at 25¢ and 26¢, and the demand is fair.

CHAR. F. MUTH.

NEW YORK.

HONEY.—We take pleasure in quoting the following prices on honey, obtainable in our market: Fancy white clover, 1 lb. sections (no glass) 20¢; fancy white clover, 2 lb. sections (glass) 18¢; fair white clover, 1 and 2 lb. sections (glass) 16¢; fancy buckwheat, 1 lb. sections (no glass) 15¢; fancy buckwheat, 2 lb. sections (glass) 13¢; ordinary buckwheat, 1 and 2 lb. sections (glass) 11¢; extracted clover honey in kegs or barrels 9¢; extracted buckwheat honey in kegs or barrels 7½¢.

BEESWAX.—Prime yellow beeswax 31¢; H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—There has been a marked increase in sales this week of comb honey. New crop, prime 1 lb. frames (pure white) have sold at 20¢ when in fancy cases, in a small way; good many sales at 18¢, for some grade 1½ to 2 lb. frames (or price package) when well-filled and white, 16¢; not quite so well filled, 15¢.

Extracted is still slow, but late receipts have been riper, and there is more inquiry; 9¢ for choice clover; dark and buckwheat, 7¢.

BEESWAX.—30¢ for prime to pure yellow. R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—A dry North wind in May made our honey crop short in the Southern counties, and ¼ of a crop is a full estimate for California. Not much arriving, and the small amount coming forward is mostly medium quality. For extra white, either comb or extracted, the market is firm. White to extra white comb 16¢; dark to good 10¢; extracted, choice to extra white 7¢; dark and candied 6¢.

BEESWAX.—Wholesale 27¢; STEARNS & SMITH, 433 Front Street.

ST. LOUIS.

HONEY.—In better demand, but readily obtainable at quotations; offerings plentiful—largest of strained and extracted. We quote new at 14¢ for strained or extracted, and 14¢ for comb. Jobbing sales of choice, in fancy packages, more. Old or inferior, nominal.

BEESWAX.—Easy, with sales at 26¢. W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—New honey continues in good demand at 18¢ for choice 1 lb. sections, and such are readily placed as fast as received; 2 lbs. not so active, at 16¢. Second quality sells 14¢. Extracted not in demand.

BEESWAX.—None in Market. A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—We have had a shipment the past week from J. E. Crane, and a good sized shipment from J. V. Caldwell, of Cambridge, Ill., whose honey we had last year.

We quote our market prices, as follows: White clover, one lb. combs 20¢; white clover, 2 lb. combs 18¢; extracted, 9¢.

BEESWAX.—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

A Visit to a School of Apiculture.

WM. F. CLARKE.

After a residence of over ten months in a country destitute of bees, it was a pleasure which only a bee-keeper can understand to find myself in a large apiary once more, like Mr. Heddon's, listening to the old familiar hum, and watching the varied movements of the busy little honey-gatherers. At this time (Aug. 13), there is a cessation of the liquid flow, the fall flowers not having yet come into bloom. Here and there a few heads of late white clover could be seen, which the bees were eager to rifle. The asters too, showed some blossoms; the bonaset looked white, and the goldenrod yellow with promise; while the melilot was plainly on the wane. Bee pasture was indeed scant, so that it was a good opportunity for judging the disposition of the "cross hybrids." I must give them the credit of being as peaceably-inclined as any bees I ever saw in like circumstances. Here, in an apiary of about 300 hives, with honey scarce, and queen-rearing operations going on extensively, I saw no signs of robbery or fighting, and did not detect a single angry buzz. The most exemplary order and quietness reigned supreme. There seemed to be no Satan on the scene, to "find some mischief still, for idle" bees "to do."

My chief interest in visiting Mr. Heddon at this time was to investigate the condition and prospects of his school of apiculture. As the father of this scheme, I felt naturally anxious to know how it was working. It has not been carried out as extensively as I had anticipated and hoped, owing mainly to a practical difficulty not fully foreseen at the outset. To run an apiary for profit requires constant supervision, and enough help to do the work efficiently—no more, no less. This is hardly compatible with having an infinite number of pupils to instruct in the principles and manipulations of bee-keeping. When applications began to pour in upon Mr. Heddon, in response to his advertised readiness to take a limited number of students, this difficulty loomed up, and he saw no solution of it for the present season, but in taking only so many as he could use to advantage in carrying on his own apiary. Hence he selected from about 20 applicants, 4 young men, whose replies to a string of questions appeared to single them out as especially promising. Some instinct, unerring as that of the bee in its choice of flowers, must have guided the selection of these pupils, for a likelier quartette could hardly have been formed. They are, Fred S. Carrier, Benzie Co., Mich.; Wm. Stolley, Grand Island, Neb.; F. S.

Williams, Susquehanna, Penn.; and W. Hickox, Cleveland, O. Three of the four are bee-keepers of two or three years' standing, and the fourth, though less experienced in bee-keeping, is specially helpful to Mr. Heddon, and his companions, in consequence of being a skillful short-hand writer.

We had a session of the school, which was more like a miniature bee convention, in the evening of the day I spent with Mr. Heddon, at which I obtained ample evidence of the thoroughness with which these young men are being instructed, and the usefulness of such a plan of teaching. The students were unanimous and warm in their testimony to the good they are deriving, and the ready part they took in the discussion of various intricate bee matters, bore out their testimony, and proved that these young men are being trained to understand practical apiculture most thoroughly. The best feature in the case, to my mind, is the fact that they are "enthused" with their business. A man must have the enthusiasm of his calling, to achieve the best success in it, and the teacher who cannot create this, is a failure.

The practical difficulty I have indicated is precisely that which besets agricultural colleges. Many farmers demand that these institutions should be self-supporting, which they cannot be, even though a portion of the time is given to manual labor. Principles must be taught, and what work is done will be more or less unskilled. A school of agriculture or apiculture must be subject to these two drawbacks. You cannot take raw youths, instruct them in the theory and practice of farming or bee-keeping, and run a farm or an apiary as a source of profit at one and the same time. It would be a poor factory that was manned wholly by apprentices.

There are, and I suppose always will be, two classes of bee-keepers, the amateurs and professionals; those who keep bees for pleasure from scientific interest, and those who keep them as a source of profit, and a means of livelihood. I am but an amateur, and doubt my ability to take an apiary and manage it so as to make it very profitable, though I know the theory and manipulations pretty well. Before going into apiculture as a business, I should want to spend a season with a practical bee-keeper like Mr. Heddon. The honey market of the world must be supplied by those who keep bees for profit, and know how to make money at it. How are the practical bee-keepers to be raised up? Shall we leave the thing to chance, and let men grope their way through labyrinths of failure, into the paradise of success, or find ways and means to train them for the business? If bee-keeping is to take its proper place among the industries of the world, it would seem to be necessary to provide an education for it.

Such an education must comprise, first, a knowledge of the principles of bee-culture; and second, the business management of an apiary. The first could be given in a school of apicul-

ture with a few bee hives to experiment with. I do not see how the second could be so easily and quickly imparted as by a season's work under an accomplished bee-keeper. It is one thing to be able to handle bees, it is another and a vastly different thing to manage them so as to make them pay. Mr. Heddon says that if he could have spent a season early in his career with such apiarist as the late Adam Grimm, it would have saved him years of blundering and discouragement. No doubt many have blundered along until they have become despairing, who might have been put on the high road to success at once by an experienced teacher. Those who are only anxious to make money by selling apiarian fixtures, will not care how many blunder into hopeless discouragement, but all who wish to see bee-keeping exalted into a regular profession or business, will desiderate some plan by which apicultural capacity can be developed into success.

Mr. Heddon's pupils are of the opinion that it would pay any young man who intends to make bee-keeping a life-work, to attend a school of apiculture where only a few hives are kept for experiment, but they consider themselves highly fortunate in being drilled into the management of a large apiary, conducted with a view to dollars and cents. Any number of young men could be taught elementary principles and manipulations in a school. Only so many as are required to do the work well, can be drilled in a practical apiary. Mr. Heddon has restricted himself, the present season, to that number. The results are, that the apiary is well "tended," everything about it is in "apple-pie order," the students are well satisfied, and so is their teacher. The only regret is that, apparently all this cannot be accomplished on a larger scale.

Chicago, Ill., Aug. 15, 1883.

Prairie Farmer.

Bees Clustering Outside.

MRS. L. HARRISON.

A lady asks why her bees swarmed seven times and returned to the same hive? She says: "I saw the queen fly away with the swarm and return twice, so I know she can fly. The bees cluster on the outside of the hive and do not appear to work much. What makes them act so?"

We do not know why they did so, but if a little discipline had been applied at the right time, it would have remedied the evil. Had the old hive been removed and a new one substituted, the colony would have entered it on their return, and then it could have been placed on a new stand and the old one replaced. Yet queens are sometimes contrary, and this one might have left the new hive and returned again to the old one followed by her subjects. We have sometimes lifted off the surplus boxes from a colony acting in this manner, and removed all the brood frames,

brushing off the bees. We extracted the honey from such frames as contained it, and those that had brood were given to nuclei. Frames containing empty comb were given the bees, the surplus boxes replaced, and they were soon working with energy. If no empty comb or foundation are at hand, frames can be given them. It is very poor economy to have bees clustered on the outside of the hive during a flow of honey, and they should be induced to go to work. An extractor has the reputation of curing laziness in bees most effectually, when it is rightly applied.

We have just now been reading in the BEE JOURNAL, how a swarm of bees that clustered on the outside of a hive, built comb in a box placed near them. We once read of a jug being found in the fall full of honey, that had been thrown carelessly down near the entrance to a hive.

The nights have been quite cool for some time, and though the sun is hot during the day, the air is cool. Poor corn and honey weather. To-day (Aug. 3) the thermometer marked about 60° at 8 in the morning. There is enough honey gathered daily to keep the queens laying, which will insure plenty of workers for fall bloom. Surplus boxes should be in readiness, for if the weather is propitious a flood of honey like that of last year may soon visit us. The rainy weather of the forepart of the season was conducive to the growth of fall flowers.

Peoria, Ill.

Read at the New Jersey and Eastern Convention.

Wintering Bees in Clamps.

C. J. ROBINSON.

The old problem—successful method of wintering bees—is still a mooted question, and we are justified in discussing the subject from each other's standpoint of observation, take the differing ideal modes and shake them together in a bag, then dump and mark the one that comes out first for "the coming" method. Let us have anything that tends to promote progress.

My experience with bees began while a youth, and dates farther back, perhaps, than any other American bee-keeper now living.

Winters in this climate have ever proved a serious drawback to success in the business. Were I omniscient in knowledge, I could not devise a method of wintering that would be exempt from death casualties incident to the vicissitudes of a northern climate. Situated in a cold region, we must accept of the conditions, and try again and again if we fail of success. As yet we are ignorant of the insect nature and natural history of the honey bee. Indeed, who can answer definitely three per cent. of the questions that naturally arise in the experience of beginners in bee-culture? One inquiry would be, "What mode of wintering bees is a success without casualties incident to boreal winters?" Such question, however,

is as absurd as would be the inquiry, "How can we rear the children to have all arrive at adult age?"

Many contrivers of hives claim that their "invention" contravenes all danger from cold, and renders nugatory the ungenial winter. Yet the bills of mortality and loss continue about the same.

The grand difficulty in the premises lies in our acquaintance with the faculty of the bee, and the science pertaining thereto. We fancy that bees are dependent for their well-being on the same agencies and like uses of those factors as ourselves. A moment's reflection can scarcely fail to make such supposition an obvious error. It is well known that bees are so constituted that they have the faculty of remaining torpid (chilled) during several days, and then from genial warmth, revive again. Moreover, the normal condition of bees while reposing in confinement caused by a low temperature, is a semi-dormant state in which there is scarcely any animate action, and very little consumption of vital air (oxygen) and carbonaceous matter (food), nor much waste of tissue. Hence the preaching about "pure air," unless bees be in a state of activity, is all bosh; no matter from whence it emanates.

The more inanimate bees remain, the less oxygen and food they require, and the less consequent waste of tissue and vitality (wearing out) during a given period—during winter. Therefore, the conditions that afford bees the most perfect tranquil repose through winter is the most advantageous. Bees in a torpid state repose safely in a dead-air chamber, in which there is no oxygenated atmosphere to excite vitality. They must consume oxygen, however, have pure air to respire when not in a quiescent state. The stupid reasoning that honey bees require "pure air" and "ventilation" through the winter's reign is as fallacious as would be a theory set up that "sleepers," the bear and the marmot, require fresh air for respiration during their dormant state. In studying the subject of safe wintering, we should bear in mind that the normal condition of bees is not at all times the same, but that they are in some respects like the animal sleepers and unlike other animals. It is well known that bees, while clustered in a circulating atmosphere, do not repose quietly in a temperature considerably below the freezing point. The colder it is, the greater the action—consumption of oxygen and food—to generate warmth needed to sustain life. It is the "happy mean"—near the freezing degree of temperature that affords the desideratum—quiescent state. A variation of a few degrees either above or below freezing, changes the circumstances of condition very materially. It would be the same with "sleepers." If, during the winter, the condition of bees be such that they consume large quantities of food, they thus live fast and grow old from the required expenditure of vitality and tissue, consequent on the taxation of generating warmth, or

active occupations in or both in or out of the hive; that is, they run their allotted race sooner, a sequence that is one of the factors of "spring dwindling."

It is obvious from the view presented in the foregoing that the successful mode of wintering is attained only, if at all, by the bees reposing in an atmosphere but slightly charged with oxygen, and the temperature as indicated. This end is best attained by means of "clamps" so-called, for winter quarters.

My experience with clamps extends over a period of a quarter of a century. I derived my knowledge of the clamp method first from Rev. L. L. Langstroth's manual. Mr. L. got the plan from a German (indirectly, I believe) who practices wintering bees in clamps—burying hives in about the same way potatoes are kept in "holes."

In my first experience with clamps I missed the mark—the end I now have in view for success. Through my ignorance, a failure on the part of "mother nature," I fancied that my repository for bees must be ventilated else respiration would cease, followed with death. I discovered that in such supposition I was in error. I constructed my clamps at first with air-tubes at the bottom of the clamps, and placed a chimney ventilator in the top, so as to provide fresh air circulating through the interior of the clamp. Such arrangement defeated the valuable points gained by a different arrangement which excludes the external atmosphere and provides a partial vacuum surrounding the hives. My first clamps, and such as was described in said manual, are substantially the same sort of repository as cellars.

My mode of constructing clamps is quite simple in arrangement. I first dig a pit in mellow earth some 20 inches deep, in the form I purpose packing or placing my hives to bury. Then nearly fill the pit with dry straw, thrown in loosely, place strips across the pit, on which place the hives. Now start walls made of boards, so as to provide a dead-air space all about the hives. The walls need not be nicely made, a skeleton frame work that will keep a coat of dry staw a little distance from the hives is all that is required. The vacant space in the clamp should be about equal to one-half the space occupied by the hives. All of the earth on the bottom of the clamp should be covered with straw, so as to prevent moisture from getting within the hives. A covering of earth should be put over all in the way potatoes are covered in what is called "potato holes." When the hives are deposited over the pit where they are to remain, I arrange for ventilating, that is, do not close entirely the entrance at the bottom, and have on top a "burlap," or something that allows rarified moist air to permeate upwards. I put a tube in the top of the clamp, and let it remain open until the bees within become quite dormant, and cold winter sets in, then close the ventilator until spring-like weather, when it may be opened.

It is known that bees buried under snow will winter safely, providing there is a vacant space within the hive, or surrounding it externally. Depositing bees in clamps should be as late as it can be delayed before freezing of the ground prevents the undertaking.

For the American Bee Journal.

The School of Experiments.

W. H. STEWART.

Bee-culture is a trade. Many engage in the business, but only a few succeed and become masters; such persons are possessed of an enterprising spirit. They not only love the arts mechanical, but they delight in the arts fine. They are not always asleep when their eyes are shut. They are often found performing one job mechanically with their hands, and at the same time engaged mentally solving some knotty problem—exploring new and untried fields of usefulness. Such persons are full of new plans and projects. They are never satisfied with the present state of things. Their mental feelers are ever reaching outward and onward, and coming in contact with blessings that never have been, but are to be enjoyed. Such persons never have time to be lazy. They have no time or disposition to write letters for a department of "Blasted Hopes." No difference whether they occupy a higher or lower step in the ladder of progress; either is to them but a temporary position from which they are ever climbing to the next higher.

From their standpoint the world is full of beauty; every cloud has a silver lining; every shadowy vale is spanned by a beautiful bow of promise. To them the word demand means a corresponding supply. To them, bad luck in bee-keeping means improper management. If they get a fine crop of honey this year they are thankful, but not satisfied. They will strive to do better next year. It is to this class of bee-keepers that we are in debt for the present improved hive; for the present strains of bees; the improved modes of wintering bees; the improved methods and fixtures for feeding bees; artificial swarming; preventing natural swarming; preventing drones; rearing queens; supplying with artificial combs; preventing the ravages of the moth; successful handling of bees without fire and brimstone, and without being stung to death.

To this same class of bee-keepers we must continue to look for answers to the many questions not yet answered. To them we must look for ways and means by and through which the many present and future demands are to be supplied. Obstacles have ever and ever will contend for the way that leads towards the promised land of success. Another class of persons undertake bee-keeping because they are fond of honey; or, perhaps, they hope to realize large profits from a small amount of capital or labor that they think to invest in

the business. They admire the beautiful honey that the masters have put in the market, but they fail to discern the close practical application of the finely-spun theories, the never-tiring energy, the non-surrendering enterprise that has been most potent, and is so indispensable to successful bee-keeping. They are slow to pay their money for bee papers, or take the time to read one; no patience to lie awake two or three hours in the stillness of night in mental labor, devising ways and means by and through which they may realize a large crop of fine honey.

His grandfather kept bees in hollow gums, and bees in the natural state live in old hollow trees, and it is (to him) all nonsense to attempt an improvement on nature's ways and means. He believes that the world is as flat as a pan-cake, and after about two or three turns of the crank, he finds that he has had bad luck in bee-keeping, and his bees are as flat as a pan-cake, too.

The above mentioned classes of bee-keepers are the two extremes, viz.: the most successful, and the most unsuccessful.

There is another class of bee-keepers which we will call the conservatives. They are the middle men (not women). We do not know of a female bee-keeper who is not of a progressive nature. This conservative class of men are often ready to invest in bee-keeping, and sometimes are easily persuaded to use hives and other fixtures that the advanced bee-keepers have long ago laid aside; or he may, and often does, start out with the latest improvements. He learns to use those things, perhaps, tolerably well, and is perfectly satisfied. He thinks that the art of bee-keeping has been worked up to a science; that the whole truth is told; that those who propose to give any new light on the subject are fanatical crazy heads, and unworthy of his attention. Let well enough alone, is his watchword. We admit that he is right to a certain extent, for we have all learned that it is better to go slow in making great changes without first counseling with that tried and trusty teacher—experience. Yet there are those that have learned many items in the school of experience, and as they meet with partial failures, they are able to recall all those lessons, and arrange them in regular order, and then spell out along the line a supply for each demand; and yet these conservatives are ready to condemn (without fair trial) each newly discovered truth.

When it became desirable to save honey combs for repeated use, then the progressive mind gave the extractor, the value of which it is hard to over-estimate. Yet, ever ready at his post, the conservative bee-keeper, and also the conservative honey consumer raised all sorts of baseless objections to its use. It is only because of the potency of truth and usefulness that the extractor is to-day in general use. Again, when comb foundation was introduced many who thought that they knew about all that there was of bee-keeping, expressed

an opinion that it would never come into general use. Many very knowing ones dubbed it fish-bone in the honey. Yet because of its worth and usefulness it has come into general favor, even with the conservative bee-keeper.

Now comes a condition upon the bee-keepers the world over that is creating considerable alarm. They have learned to save all their beeswax, work it over into comb foundation and give it back to the bees, thereby saving them the time and labor of producing their own wax. Thus a perpetual consumption and non-production of beeswax has culminated in a wax famine. Now the question is, what shall we do for wax, and this is the most important item in all progressive bee-keeping. How can we successfully winter bees and prevent spring dwindling are questions that threaten to baffle the wisdom of the closest observers; but if these two difficulties should be overcome, the spare combs and surplus wax will be diminished in proportion to our success in preserving the bees. However, the wax must be had, and will be forthcoming in due time, but

Conservatism in vain may try,
Exhausted fields for fresh supply;
New-born thoughts must lead the van,
To fields as yet untried by man.

Banish all fear, fraternal friend,
Bee-culture has not found its end;
Although from giddy heights you peer,
Trembling lest the end be near.

Let us try what covert fields
Of art and enterprise can yield.
The astute brain and cunning hand,
Meet, then embrace, each demand.

Orion, Wis.

Rural New Yorker.

Bee Hives Made of Paper.

CLARK D. KNAPP.

Those who have been the most interested in the keeping of bees, have for years been trying to invent a hive that would be equally well adapted to the cold of our winters and to the heat of midsummers. I saw in the *Rural* a short time ago an article upon the subject of bee-hives, which was illustrated, but the writer did not touch upon the question of a summer and winter home for the bees. Many a winter hive has been invented, but, as a general thing, apiarists have given no thought to the comfort of the bees in the long, hot summer days, except by boring a few holes in the hive for ventilation.

I have always thought that the hot rays of the sun in June, July and August were unhealthy for the bees in the hive, the heat blistering clear through the wood and making the inner part of the hive so hot that the industrious little fellows cannot work with any degree of comfort. Then, in addition to the sun's heat, there is the animal heat of the bees! What a hot place must the interior of the hive be for so much industry!

Now I am opposed to placing the hives in the shade. The bees need the sunshine upon the outside, but not upon the inside of the hive. They are early risers. They are up, dressed,

have breakfast and are at work early when the morning sun glistens upon the dew drops in front of their mansion. In the State of New York the bee has no time to wait for the sun to warm the damp air beneath the thick branches of some moist, moss-covered apple tree. Therefore, I put my bees in what I choose to call my summer-and-winter hive, then set them out in God's sunshine to enjoy themselves as they work.

I make my hive with an inner and an outer wall. These walls are one inch apart. Before I put the top on I take paper—old newspaper, in fact any kind of paper—and stuff the space between those walls full, pounding it down as hard as I can without bulging the boards that form the inner and outer walls. I have two half-inch top ventilators, and in the summer I give a good ventilation from the bottom. That is all the secret there is to my summer-and-winter bee hive. It can be made in any shape and after any pattern. You can have any style of frame, or it can be made without frame.

Now, reader you ask why use paper? Is not sawdust or straw just as good? I use paper because it is a non-conductor of heat. It is one of the best non-conductors of heat known. Now it stands to reason, that if paper will keep the heat of the sun out of the hive in the summer time, it will keep the heat of the bees in the hive in winter. And that is just what the bee men have been looking for for years. Try it, brother bee men, and I believe that you will well satisfied with the experiment.

For the American Bee Journal.

Bees, Flowers, Honey and Music.

G. W. DEMAREE.

The Union Kentucky Bee-Keepers' Society has just held one of those delightful social meetings which its members and others have so much enjoyed in the past. This time the meeting was held at the apiary of W. T. Stewart, located on the princely estate of Mr. M. B. Moody, four miles north of Eminence, in Henry county. On the morning of the 14th inst., I boarded the accommodation train and was landed at the flourishing town of Eminence, at an early hour, where I was met by Dr. Ed. Drane and James Drane, the latter an uncle of the Doctor, and although an aged man, he runs a fine farm, and also a fine apiary of Italian bees on it, who took me in their "rig" and drove rapidly to the place of rendezvous. I shall not soon forget the warm and cordial reception with which we met at the good graces of Mr. Stewart and lady, and Mr. Moody and family. Every breeze seemed to waft the glad words "welcome, welcome."

After the company had well gathered, President Drane called the meeting to order, and there, under the shade of the trees near the apiary, many interesting subjects pertaining to the business of bee-keeping were warmly but pleasantly discussed.

The present season has been one of unprecedented "swarming," and hence this subject was thoroughly ventilated. Most, if not all of the members of our association have had all their "theories" pertaining to the "controlling of swarming" knocked into "pie" the present season, and hence they were humble enough to be instructed by each other's experience.

After a pleasant bee talk, Mr. Moody invited the convention to adjourn to the grove, which surrounds his stately family residence, where we found a table loaded with all the good things that the blue grass regions can give. The ladies have levied a strong and lasting contribution on our gratitude for the bountiful and graceful manner in which they catered to the wants of the "inner man." After dinner was over the company gathered in the capacious parlors where they were regaled by the Misses Moody's with as fine music, instrumental and vocal, as was ever heard outside of the professional circle. What is more appropriate than bees, flowers, honey and music?

The company retired to the apiary and resumed the "bee talk," when Mr. Moody came forward, and in a jocular way said, that he wanted to test the members of the society as to whether they had any ideas of "old bee-culture," that he had a "bee tree" down in the woods, and he would order the "boys" (the farm hands) to cut it down. Some of the company were right in for the sport, but others demurred, saying that they had no inclination to handle bees "laying around loose." Mr. Moody withdrew the motion, being too magnanimous to insist on anything without universal concurrence. The tree was left standing.

W. T. Stewart read a letter from W. W. Williamson, Lexington, Ky., discussing the propriety of our beekeepers attending the convention at Toronto, and proposing an excursion trip of many Kentucky apiarists.

After drafting suitable resolutions, tendering the thanks of the society to Mr. Stewart for his fine display of bees and honey, and to Mr. Moody and family for hospitalities, the convention adjourned; after which the members lingered for sometime as though enchanted by the splendor of Mr. Stewart's finely fitted-up apiary. If there is a finer apiary in the South than Mr. Stewart's, I have no knowledge of its whereabouts. Mr. Stewart is an artist and painter, and this advantage has enabled him to make the finest display of painted hives. Nearly all his hives differ in color, and are tastily trimmed with appropriate shading.

To set off the apiary to the best advantage for the occasion, Mr. Stewart had prepared a large glass show case in which was a "stack" of beautiful section honey in the form of a pyramid, the cap piece of which was a "wee bit" of a section of about $\frac{1}{4}$ pound. On top of the case were some Muth honey jars filled with extracted honey.

This case occupied a conspicuous place in the lawn just in front of the

center group of the apiary, and was admired by all who saw it, because of the delicious contents within. The bees no less admired the white pyramid, and might be seen poised on the wing gazing through the glass with covet in their eyes.

A novel and pleasing feature about Mr. Stewart's apiary is that instead of numbering his hives with figures in the usual way, his hives are named after some of the prominent beekeepers. In the middle of the centre group is T. G. Newman, Editor of the AMERICAN BEE JOURNAL. This is a large chaff hive, splendidly painted, and the "lettering" is beautifully and artistically executed. On the left of this central figure, and composing apart of the group, may be seen L. L. Langstroth, Dr. Dzierzon, Charles Dadant, E. Secor, G. W. Demaree, Lucy Harrison, G. L. Viallon, James Heddon, W. M. Kellogg, Ira Barber, R. Wilkin, H. Alley, A. I. Root, G. W. Ashby and O. M. Blanton. On the right of the central figure are W. R. Howard, W. F. Clarke, Mrs. Luper, C. H. Lake, H. R. Boardman, C. C. Miller, L. C. Root, J. H. Morton, H. Roop, E. B. Southwick, E. E. Hasty, G. W. Knight, J. M. Hicks, D. A. Pike, F. Benton, R. M. Argo, O. O. Poppleton, and C. N. Abbott. Immediately in front of the center group stands a fancy little tall cottage hive, neatly trimmed with light brown, this is Prof. A. J. Cook. On its right stands E. Drane, D. A. Jones, N. P. Allen, G. M. Doolittle, L. Johnson and Frances Dunham.

When the work of "lettering" is finished there will be 180 bee-keepers and writers on bee-culture in one apiary—a pretty good force you will admit. Stretching away down the line towards the honey house, are G. M. Alves, J. B. Baker, T. Balcomb, M. M. Baldrige, A. Benedict, O. F. Bledsoe, E. L. Briggs, J. P. H. Brown, T. J. Burrill, W. H. Bussey, J. V. Caldwell, B. F. Carroll, F. B. Cheshire, R. Corbitt, C. H. Dibbern, L. J. Diel, F. L. Dougherty, J. Craycraft, J. W. Bagley, J. D. Evans, E. T. Flanagan, G. Grimm, H. S. Hackman, W. S. Hart, G. W. House, H. L. Jeffery, E. C. Jordan, A. R. Kohnke, C. F. Koch, J. E. Lay, J. Lee, M. Mahin, J. B. Mason, A. F. Moon, R. M. Osborn, E. Parmley, J. L. Peden, A. Pettegrew, J. E. Pleasants, Mrs. A. M. Sanders, G. L. Tinker, Della F. Torre, O. M. Townsend, T. L. Vondorn, W. W. Williamson, Wm. M. Rogers, S. M. Locke, J. M. Brooks, Mrs. L. C. Axtell, E. M. Hayhurst, James H. Reed, Wm. F. Kanyler, John T. Connley, C. H. Dean, and others whose names I failed to get.

Of course Mr. Stewart keeps a record of what results he gets from his colonies; without the least idea of his methods, I should presume that it would run somewhat after this fashion: D. A. Jones, 1883, 400 lbs. of extracted; queen, best Italian stock. James Heddon, queen "mismatched," must be superseded. G. W. Demaree, too many "stripes" entirely.

Well, now, to be serious, Mr. S. claims to have taken about 400 pounds from the colony in the hive of D. A.

Jones. This, with us, is considered an extraordinary large yield from one colony, as we depend alone on white clover for surplus.

Members reported their bees in good condition, enough honey coming in each morning to keep up breeding, which will keep the workers in good trim for the fall harvest, if we are blessed with a flow of nectar.

Christiansburg, Ky.

Lewiston Journal.

Where do Bees Cluster in Winter.

W. M. F.

I have had occasion to inspect nearly 50 hives where bees have died during the past winter and spring, in this and adjoining towns. I have also observed the nature and habits of the honey bee for the last 30 years, and hence I may be allowed to speak somewhat authoritatively on the above subject. In nine-tenths of those colonies which died the past winter, I have found them clustering close together at the top of the frames, with honey at one or both ends of the hive. I refer to bees wintered on the summer stands, with chaff protection above and around them. In a few instances I have found some honey at the lower part of the frames, and the reason is obvious. I would inform Mr. Churchill, that bees do not cluster, in late fall at the top of the hive, unless the colony is quite large and fills the whole space of the frame; but, on the contrary, where they reared their brood, on the empty comb of the brood nest, let it be where it will, but usually in the centre of the hive below and between the capped honey. Usually when the brood comes out late in autumn, there is stored some honey below the brood nest, if there has been no place to store it elsewhere; when it is stored below and they have clustered where the brood was last reared, instead of going down to eat it, they invariably crawl upward, until the top is reached. When the hive is shallow, or the colony fills the frame, they will cross over the frames towards one end, if it is warm enough in the hive for them to do so, but if it is too cold, then they remain and starve. Sometimes they traverse to one end, but woe to them, they cannot live to return to the other end on account of the frost, or frigid temperature within. But, says one, the heat generated by the bees, ascends, strikes the top of the hive, spreads out horizontally, warms the honey at the ends, and thus invites the bees to follow in this direction. Why, friends, how far do you suppose heat of the bees extends horizontally, when it is so cold in the hives as to freeze the slightest vapor—when the temperature outside of the one inch board hive is 25° below zero? Not much heat outside the immediate bodies of bees, surely, unless it be directly above the space of a bee's proboscis. Hence, we must devise some plan to keep the interior of the hive in an even temperature of 45° through the winter, or build our hives

so that bees may store sufficient honey above the brood nest for their winter's consumption.

Ohio State Bee-Keepers' Convention.

The Ohio State Bee-Keepers' Association will hold a convention during State Fair week, at Columbus, O., commencing on Tuesday evening. The following programme has been arranged:

Tuesday Evening, Sept. 4.—1. Greetings and organization. 2. Annual report of Secretary and Treasurer. 3. Election of officers. 4. Annual address of the President. 5. General discussion of topics presented by members present.

Wednesday Evening, Sept. 5.—1. Address by S. D. Riegel on improvement in bee-culture as deduced from the season's operations, followed by discussion on the same. 2. Question drawer and discussion on topics presented.

Thursday Evening, Sept. 6.—1. Address or general talk by Vice-President Aaron Benedict, on the rearing and management of queens, followed by discussions of the same. 2. Question drawer and discussion of topics presented.

Conference meetings of bee-keepers and those interested will also be held each afternoon at 1 o'clock in Apiarian Hall, on Fair grounds.

The place of meeting of the convention to be decided at time of the Fair, probably in the upper room of Apiarian Hall.

Everybody who is at all interested in bees is invited to meet with the Association, and all who can bring articles for exhibition, as efforts are being made to render this department a grand success.

The State Board of Agriculture has furnished the bee-keepers a separate hall for their exhibits at the State Fair, with an upper room in which to hold meetings. Ample room will be furnished for all exhibits.

Dr. H. BESSE, Pres.

D. SPEAR, Sec.

AARON BENEDICT,
Supt. Apiary Hall.

To the Bee-Keepers of California.

The National Convention has been appointed to be held at Toronto on Sept. 18, 19 and 20. I now call upon the secretaries of the various county associations of this State, and for counties having no association, on any enterprising bee-keeper who will undertake the work, to collect and make out reports for their respective localities of the number of bee-keepers, number of colonies in the spring and on hand, and amount of comb, extracted and strained honey, and of beeswax taken, or estimated to be taken during the season, and to forward them to me by the 6th of September. Send no individual reports except from counties having no association and but few scattered apiaries. I hope to hear from all parts of the

State, but unless I get satisfactory reports from the principle honey-producing counties (San Diego, Los Angeles, San Bernardino, Ventura, and Santa Barbara), and within the specified time, I shall send nothing to the convention. The former annual reports, as well as that of Dr. Miller, who, in response to a call for statistics, received only five answers from this State, where there is said to be 600 bee-keepers, have been a mere farce, unsatisfactory to those who undertook the work, and of no practical information to anybody else, and I have no desire to make a repetition in that line. Our object is not to present figures that will astonish the world, but to obtain facts, such as they are, that we may get a clearer insight into the true status of the bee-business at the present day. I can see no good reason for withholding the truth, be it flattering or not, and I hope that each individual bee-keeper will aid the secretaries in their work, by giving or forwarding to them the desired information.

WM. MUTH-RASMUSSEN,

Vice-Pres. for California N.A.B.K.S.
Independence, Inyo Co., Cal.

Ontario Convention.

The third annual general meeting of the Ontario Bee-Keepers' Association will meet in the City Hall, Toronto, on Tuesday, the 20th day of September next, during the second week of the Industrial Exhibition. As the North American Bee-Keepers' Convention meets at the same time and place, it has been arranged that the two bodies hold joint meetings in discussing matters pertaining to our common interests, as the leading bee-keepers of America are to be present. This will, undoubtedly, be the most interesting meeting of apiarists ever assembled in Canada. The venerable Mr. Langstroth and all the prominent bee-men of the United States are expected to be present. A profitable time is anticipated, and a good turnout requested. The convention will last three days. A meeting for the purely business work of our association will be held sometime during the convention, of which due notice will be given.

R. MCKNIGHT,

Pres. Ontario Bee Association.

The S. W. Iowa Bee-Keepers' Association will meet at Red Oak, Iowa, Aug. 29. Members of the society are requested to bring their apiarian implements and put them on exhibition at the fair. Our society is in a flourishing condition, having a membership of 64, and more being added to our number at every meeting. Auxiliary associations are being formed in all our counties, and southwestern Iowa will soon be one of the foremost sections of our country in apiculture. In our report will be given the number of colonies owned in the society, produce, etc.

W. J. OLIVER, Sec.

L. E. MERCER, Pres.

To Bee-Keepers of North America.

As one of the oldest of your number, I desire respectfully to remind you that the Toronto Convention will afford us all an opportunity of paying a well-earned tribute to the memory of our honored dead—Samuel Wagner, Moses Quinby, Adam Grimm, Richard Colvin and others, who did so much to elevate American apiculture to its present high position.

L. L. LANGSTROTH.
Oxford, Ohio, Aug. 23, 1883.

The Cass County Bee-Keepers' Association, organized on the 15th of August, will meet on the 10th of October, 1883, in Logansport, Ind. All persons interested in bees and honey are respectfully invited to come.

DE WITT BROWN, Sec.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Curious Freak of Bees.

I desire Mr. Heddon to reply to this: One of my colonies of bees cast off a swarm in the middle of July, and in order to prevent the second, I cut out all their queen-cells (they were hybrids) and grafted in a cell from an Italian colony, and when cutting out the queen-cells from this hybrid colony, one cell dropped down unnoticed to the bottom of the hive, and in a few days it swarmed again with the young Italian queen, and, on examining the old hive, I found this queen-cell on the bottom, took it out and cut it open, and to my surprise I found a dead worker bee in it, and an old one at that. The mystery to me is, Why did the bees seal that cell with that dead worker bee in it and then swarm. I gave this colony a laying queen, so everything is all right.

A. RICKENBACHER.
Gahanna, Ohio, Aug. 15, 1883.

ANSWER.—I have never had a case like the one above referred to. I do not know as we have any precedent of the kind. I do know that it is one of the traits peculiar to the Italians, especially the golden variety, to cast swarms leaving no cells behind. Such acts are exceptional, of course. Sometimes we find worker combs in queen-cells, but they were hatched and grown in the cell, evidently intended by the bees for a queen. Are you sure the bees sealed up this old dead worker before or immediately after the swarming? But, no matter at which time they did it, their reasons for so doing can be hardly more than guessed at by any of us.

SELECTIONS FROM OUR LETTER BOX**Rolling in the Buckwheat Honey.**

Last spring we purchased of Mr. Doolittle an Italian business-queen. We reared about 40 queens from her. These young queens were mated in our yard by German drones, and at this date these hybrid bees are just rolling in the buckwheat honey. The weather is all we could wish, and every indication now points to a most bountiful fall harvest.

A. W. OSBURN.
Water Valley, N. Y., Aug. 17, 1883.

Why so Much Extracted Honey.

As there is so much difference in the price of extracted and comb honey, why not produce more comb and less extracted? Will we not get as much honey in the aggregate to use lower stories exclusively for brood and winter stores, and use the section boxes on top of brood frames for surplus honey? I am inexperienced, but expect to "grow up," with the start I have, to considerable of an apiary, and am anxious to know why so much extrated honey.

K. A. W.
East Liberty, Ohio, Aug. 15, 1883.

[Both comb and extracted honey will be in demand, and all can produce which ever they desire, or have the convenience for doing. The extracted honey is used for manufacturing purposes, as well as for table use, instead of syrups, fruit, etc. Both kinds are necessary. Side storing in the brood chamber is practiced by many, but the tendency is towards favoring top storing exclusively.—Ed.]

Large Fall Crop Expected.

I have not obtained any honey since the white clover I extracted in June. The bees have been getting enough honey to keep the queens laying all through the summer. They are now working on buckwheat, and the wheat fields are full of bees, working on the ragweed, which is covered with blossoms. The weather has been very dry since the middle of July, but we had a nice rain last week, and another to-day. I expect a big flow of honey between this and the middle of September.

R. GRINSELL.
Baden, Mo., Aug. 22, 1883.

Cleome.

Enclosed please find a plant that grows wild hereabouts. The bees work on it, beginning at daylight. I can, at this moment, see drops of honey in it. Can you name it?

JOHN R. CRAIG.
Beatrice, Neb., Aug. 21, 1883.

[It is Cleome, or the Rocky Mountain bee plant—an excellent honey-producer.—Ed.]

Wintering Bees in Texas.

Bees have done well in this vicinity since spring opened. Box hive men lost heavily during the latter part of winter. I put 36 up last fall, 4 of which were weak in stores and bees; to those I gave plenty of honey, by placing full boxes on top of frames, which was soon taken out by robber bees, and the weak colonies were left to starve, which they soon did. I have concluded never to try to winter a weak colony again. I also bought 9 weak colonies in January, which I tried to save by feeding, and succeeded in saving 5 of them. I commenced the spring with 36 colonies, 6 of which were very weak; they have increased to 69 by natural swarming, and I hived back and doubled about 20 swarms, and lost 15 or 20 more. They swarmed incessantly from the first of April to the 12 of July. There was a good honey flow from the 20th of June to the 8th of August; since which time robbing has been "the order of the day." I have been watching the BEE JOURNAL closely to find a plan by which this robbing could be prevented, but have never seen anything that gives satisfaction. It bothers and perplexes me worse than anything I have found in bee-keeping. My bees are mostly blacks; I have never seen an Italian robbing, and have never seen a colony of Italians robbed by other bees. I think I shall Italianize them, next spring, for this quality alone. I have taken, up to date, about 2,000 pounds of comb honey, and everything is favorable for a good fall crop.

B. L. CLEMENTS.
Queen City, Texas, Aug. 20, 1883.

Poorest Honey Crop ever Known.

This has been the poorest summer for bees ever known in Sanilac County, Mich. I commenced with 42 colonies; increased by natural swarming to 77; we had rain and cold up to Aug. 10. White clover was plenty everywhere. Since the August 10, they have been working on sweet clover, still they get but little honey in the boxes. Some of my neighbors have not taken off one box yet. I still hope for the best.

JOSEPH LEE.
Farmers, Mich.

Honey Barometer.

I have been wondering if there is interest enough in the country to give short weekly reports from three or four districts in every State, saying what the state of the honey flow is, weather, how bees are working, blooms, etc. In this way we could have a barometer all over the country. The idea adopted in the *British Bee Journal* is what I mean in "Echoes from the Hives." If this thing was arranged for now systematically, it might be worked next year. Another thing, could not sections of States establish honey depots in the nearest cities, receive the honey of the members and grade it, and so help to keep up the price.

R. F. KENDALL.
Austin, Texas, Aug. 20, 1883.

August Dwindling.

Who of the bee-keeping fraternity have had an experience of an August dwindling? Here in southern Ulster county, in eastern New York, on the afternoon of Aug. 16, bees in large numbers lay around my yard unable to reach their hives from being chilled, each laden with honey or pollen. But it so happened to be warm the next day, and they most all revived, though had it rained the following night, which it threatened, they would all have perished.

D. A. MARTIN.

Plattekill, N. Y., Aug. 20, 1883.

Over 600 lbs. from One Colony.

On page 398, BEE JOURNAL, Mr. Knickerbocker states that his "boss colony" has already gathered 145 pounds, with the prospect of getting 175 pounds. My "boss colony" (a full blooded Italian) has already gathered 340 pounds; but my "bossier" one (an *Americanus*) has already gathered 603 pounds, with the prospect of 50 or 100 more. This has been a good year for honey here. The honey flow has been very regular for three months, but is slackening up some now. Our main source of honey is Alfalfa.

J. F. FLORY.

Lemore, Cal., Aug. 16, 1883.

Collecting Sweet Clover Seed.

Bees are doing well here this season. Be kind enough to state in the Weekly BEE JOURNAL the best method of collecting seed from the bokhara or sweet clover.

J. C. THOM.

Streetsville, Ont., Aug. 16, 1883.

Will you please inform me through the Weekly BEE JOURNAL how the seed of the melilot is secured from the stalk, and what it is worth by the quantity?

W. M. HEILIG.

Lutherville, Md., Aug. 23, 1883.

[Its price is regulated by the "supply and demand" in the localities where it is to be sold. To secure it, mow, thresh and screen it, as you would other grain.—ED.]

Honey-Producing Plants.

We are expecting a fine display of honey-producing plants and insects injurious to bees, at the Tri-State Bee-Keepers' Association meeting and Fair. It is prepared by a student of the Michigan University. I am not positive it will be here, but expect it. Prof. Cook has written me in regard to it. The Professor has also given me an invitation to act as chief judge at the Fair at Detroit, and I expect to "obey orders."

A. B. MASON.

Wagon Works, O., Aug. 24, 1883.

"Nothing but Leaves."

In my communication on page 419, where it is said that the caps were nearly all filled with "honey," it should have read nearly all filled with leaves. The weather is again cool during the nights, and honey is coming in slowly.

H. S. HACKMAN.

Peru, Ill., Aug. 24, 1883.

Honey Yield in Ontario.

Being desirous of having my bees store surplus honey in the second story of my hives, I determined to remove a couple of sections from the brood-chamber to the upper story, and, in doing so, I was obliged to cut some of the sections apart where they had worked together, and considerable honey ran down to the bottom of the hives, making a condition unsatisfactory to the bees. What are the probable results of such removals? My hives had a strong force of working bees, with the bottom full of honey, and most of the section combs worked together. I had the second story of my hives filled with sections of comb foundation, and yet the bees would not work on the second story. I made this division only three days since, and I now find them working all right with the exception of one hive, on the front of which a large number of bees cluster. This I attribute to the unsettled condition of the bees, caused by cutting the combs, whereby the honey flowed to the bottom of the hive, causing confusion in their working. The yield of honey in this part of Ontario, this season, so far, is far above the average, and bee-keepers anticipate very large results, and well they may, when comb honey, broken up, sells at 15 cents per pound, and one-pound boxes of honey retail at 25 cents per pound; white extracted honey is sold at 12 cents per pound wholesale, and retails at 15 cents per pound. Our bees are principally Cyprians and Italians; very few black bees are to be found, and those who have them are classed among the old fogies. J. H. PECK.

Trenton, Ont., Aug. 20, 1883.

[The removal of unfinished sections to the upper story is frequently done to induce the bees to work up there, and there will be no trouble to get the bees to clean up the honey; in fact that is, of itself, an inducement for them to store it above.—ED.]

Report for the Season.

I commenced the season with 57 colonies; some of them were by no means strong. They brought in the first pollen on April 2; one month later than usual. My first swarm issued May 18; ten days earlier than last year. It commenced to rain April 30, and continued about five days out of every week, more or less, up to June 22, when it ceased. White clover commenced to bloom the latter part of May; the bees made good use of the time between showers, and at this date the pasture fields are white with bloom. Our favorite linden commenced to bloom the first of July, and lasted for 25 days; it gives a bountiful harvest of fine honey. I sell it readily at my home market, extracted at 10 cents; comb at 15 cents per pound. One-pound sections are a new thing here; a few days ago I put a crate of one-pound sections of beautiful white comb honey in the store; as it was the first they had ever seen, it was admired by many. Bees

have swarmed too much here this year. Many wild swarms passed over; one went in the gable end of a dwelling house, at a knot hole in the weather boarding, and they are still working lively.

H. CLARK.

Palmyra, Iowa, Aug. 1, 1883.

Home Markets for Honey.

I said, many years ago, that all the honey produced in the state of New York could be consumed in the State, without taking any of it to our largest cities. This may seem a broad assertion, but let bee-keepers commence, as I did 20 years ago, to dispose of their honey, and I think that they will be convinced that their country and village will consume nearly all of it. The very same families that a few years ago bought but a few pounds, will now take as many dollars' worth; and for the past few years I have had more orders by far than I could fill. Another thing, you are not only creating a home market which will increase as years roll by, but you get the cash; but if it be consigned to the best commission men, time must elapse before you get the pay, say nothing of breaking and many other contingencies. One word of caution: be careful not to try to sell honey of an inferior class for first-class; sell it for just what it is. I never have any trouble to sell it all.

Oran, N. Y.

W. P. B.

Queen's Stings, the Clovers, etc.

Two weeks ago, a Holy Land queen stung my wife on the middle finger, while she was daubing her with honey, to return her to hive No. 19, from which she had just emerged with a swarm; and, one day last week, my daughter was assisting me, and while she was preparing to kill a Holy Land virgin queen in hive No. 3, she was stung on the middle finger. My wife and daughter are my main helpers in the apiary, and they have handled hundreds of queens, and were never stung by one before. The stings were painful; both queens retained their stingers and are now doing splendidly. My 5 acres of buckwheat are in full bloom, and the bees are on it from daybreak till noon, and are on the sweet and red clovers all day. The bees are not now working on the white clover, but very little. The figwort and catnip are blooming, and dotted thick with bees from early until late. My Black-Italians (hybrids) do not work on red clover. My Syrio-Italians draw the nectar from the red clover bloom, easily and quickly. The queens all had a vacation some three weeks back, but now they are at the front, booming. The honey is the finest I ever saw. The prospects are yet splendid in favor of a fall honey harvest. We have had no rain now for ten days, and to-day it is 94° at 1 p. m.; wind northwest. I keep my 51 colonies all equal and full of bees; when one gets so full that they cannot be smoked in, to stay and work, I find the weakest hive, and, late in the evening, I shovel them up and take them to that hive and smoke them in.

Kane, Ill.

R. M. OSBORN.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

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We have put the price still lower, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00, or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

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Any one sending us a club of two subscribers for 1 year, for the Weekly, with \$4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

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All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

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BUSINESS CHANGE.—I wish to announce a change in my business. You are aware of the death of my oldest son, which occurred in May last. He had been quite a help to me. After his health was impaired, he went to the country, and I had become accustomed to miss his assistance in the business; but he had taken upon himself the care of the farm. When I found that there was no remedy for his unfortunate disease, my mind was made up to reduce my business. My grocery and seed trade was unusually heavy the past spring and summer, while my honey trade kept growing steadily. When the rush for supplies was added, I was crowded more than was pleasant. I could take no time to write a postal card, unless it was imperatively necessary. On Monday last I rented my store, etc., to a couple of young business men, and sold them my stock of groceries. I may be found, hereafter, in my honey store, on the corner lot opposite the old store. Pure Honey and Bee Keepers' Supplies, Seeds and Pure Baking Powder, will hereafter be my business.

CHAS. F. MUTH.

Cincinnati, O., Aug. 22, 1883.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

BEES and HONEY,

OR THE

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With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.
Very Respectfully Yours,

BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—one-cent stamps; if not, any denomination of postage stamps will do.

The new two-cent postage stamp is to be of a metallic red color, with a vignette of Washington. It will supersede the present three-cent stamp on the 1st of October.

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Trial Trip—25 Cents.

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Books at Fairs.—Those who make an exhibit at Fairs will find that an assortment of Books and Pamphlets would sell and leave them a profit for handling. We will send such, postage prepaid, at 25 per cent. discount; or if the purchaser pays express charges, we will supply any of our own publications at 40 per cent. discount.

The new Postal Note will be obtainable in a few days at the Post-offices all over the country. Then any sum from one cent to five dollars can be sent in a letter, by obtaining a Postal Note, costing only 3 cents. After October 1, small sums can be easily sent to this office for 5 cents (3 cents for the Postal Note and 2 cents postage on the letter), and there will be no need of sending postage stamps in letters, which often get all stuck together by the damp weather, or being handled while perspiring.

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OR,

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